

#### ABSTRACT OF THE DISCLOSURE

Disclosed is a solid polymer fuel cell system having a plurality of unit cells stacked one after another, wherein each of the unit cells is equipped with an electrode of an anion exchange membrane and an electrode of a cation exchange membrane which are adjacent but not in contact each other, gas diffusion layers commonly disposed on both sides of these membranes for allowing electrons generated at the catalyst to pass through, and an interconnector which is a current carrier having a gas passage and is disposed on the outside of the gas diffusion layer. The present invention makes it possible to save auxiliary equipment such as humidifier from a fuel cell system and owing to this reduction in the apparatus, to attain system simplification, cost reduction and space saving.